

## **REMARKS**

By the subject amendment, Applicants have amended Claims 20, 25, 27 to 29 and 31. It should be noted that none of these claims has been narrowed in scope. Rather, the amendments either broaden the scope (i.e., Claims 28 and 29) or do not alter the scope of the claims (i.e., Claims 20, 25 and 31). Claims 1 through 35 are presently pending herein. Claims 1, 25, 26, 29, 31 and 32 are presented in independent form.

The allowance of Claim 29 and the indication of allowable subject matter in Claims 11 to 13, 15 to 22 and 24 is acknowledged with appreciation.

Claims 34 and 35 have been rejected under 35 USC § 112, second paragraph. Specifically the Examiner has alleged that the identified clause in Claim 34 is unclear. Applicants respectfully submit that the term “removed” is used in Claim 34 in its general ordinary meaning. One of many examples of the features set forth in Claim 34 is illustrated in Figure 10. As is readily illustrated, the add-in ports, add-out ports, drop-in ports and drop-out ports are physically disposed directly adjacent a first end (e.g., left end) of the corresponding module and removed from the second end (e.g., right end) of the corresponding module. Applicants respectfully submit that Claims 34 and 35 fully comply with 35 USC § 112, second paragraph.

The Examiner has objected to the drawings as allegedly failing to disclose the connection elements recited in Claims 26 to 28 and 33. Claims 26 to 28 were also rejected under 35 USC § 112, first paragraph as allegedly not being enabled by the Specification. It is believed that the Examiner meant to include Claim 33 as well in this rejection as this claim is discussed in the body of the rejection. Claims 26 and 33 have the same objected to connection language and, therefore will be addressed together.

Specifically, Claims 26 and 33 recite “connection elements that optically connect the add-out port of said first module to the add-in port of said second module, and the drop-out port of said second module to the drop-in port of said first module. This connection is not only depicted in numerous drawings but is fully described in the Specification. For example, Figure 3 illustrates one example of many of this claimed connection. Module 100 reads on the first module while module 101 reads on the second module. The connection elements are the fibers 120 and 130. The specific ports being connected are described, for example, in paragraph 21 of the Specification. As such, the drawings do in fact illustrate the connections set forth in Claims 26 and 33. Moreover, there is clearly an enabling disclosure for the connections set forth in Claims 26 and 33. Without conceding to the propriety of the rejections and objections raised in connection with Claims 27 and 28, these claims have been amended to delete certain connection elements. Accordingly, Applicants respectfully request that the drawing objections and the rejection under 35 USC § 112, first paragraph be withdrawn.

Applicants note that Claim 26 has not been rejected on prior art. Accordingly Claim 26 and the claims that depend therefrom are clearly patentable.

Claims 1 to 8, 14, 23, 25, 30 and 31 have been rejected under 35 USC § 102(e) as allegedly being anticipated by Medin et al. (i.e., U.S. Patent No. 6,542,660). Claims 9, 10 and 32 to 35 have been rejected under 35 USC § 103 as allegedly being rendered obvious by Medin et al. (i.e., U.S. Patent No. 6,542,660). The anticipation rejection will first be addressed followed by the obviousness rejection.



## ANTICIPATION

The legal standards for anticipation rejections of the type imposed by the Official Action issued in this proceeding are set forth below.

“Anticipation...requires that the *identical invention that is claimed* was previously known to others and thus is not new...*When more than one reference is required to establish unpatentability of the claimed invention anticipation under § 102 can not be found*, and validity is determined in terms of § 103.” *Continental Can v. Monsanto*, 948 F.2d 1264, 1267 (Fed. Cir. 1991)(emphasis added).

“A patent is invalid for anticipation *when the same device or method, having all the elements and limitations contained in the claims*, is described in a single prior art reference.” *ATD Corporation v. Lydall, Inc.*, 159 F.3d 534, 545 (Fed. Cir. 1998)(emphasis added). See also *Crown Operations International, Ltd. v. Krone*, 289 F.3d 1367, 1375 (Fed. Cir. 2002)

The single reference must have an enabling disclosure. See *Advanced Display Systems Inc. v. Kent State University*, 54 USPQ 2d 1673, 1679 (Fed. Cir. 2000)(“Accordingly, invalidity by anticipation requires that the four corners of a *single, prior art document* describe every element of the claimed invention, expressly or inherently, such that *a person of ordinary skill in the art could practice the invention without undue experimentation.*”)(emphasis added); See also, *PPG Industries, Inc. v. Guardian Industries Corp.*, 37 USPQ 2d 1618, 1624 (Fed. Cir. 1996)(“To anticipate a claim, a reference must disclose every element of the challenged claim and *enable one skilled in the art to make the anticipating subject matter.*”)(emphasis added)

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. *Such evidence must make clear that the missing descriptive matter is necessarily present* in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can*, 948 F.2d at 1268. (emphasis added)

“*Inherency, however, may not be established by probabilities or possibilities.* The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)(emphasis added). See also, *Continental Can*, 948 F.2d at 1269.

“[T]he initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention rests upon the examiner...In relying upon inherency, *the examiner must* provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 USPQ 2d 1461, 1464 (BPAI 1990)(emphasis in original)

*When evaluated under these standards, the rejection of Claims 1 to 8, 14, 23, 25, 30 and 31 under 35 USC § 102 cannot be sustained.*

Claims 1, 25 and 31 are the only independent claims that have been rejected as allegedly being anticipated by Medin et al. Each independent claim is addressed below in turn.

Applicants’ invention as recited in Claim 1 is directed to a node comprising *a series connection of elements  $E_i$ ,  $i=1,2, \dots,N$ , where  $N$  is greater than 1, forming a first*

*optical path, where each of said elements  $E_i$  injects an optical signal of band  $\lambda_i$ , and where  $\lambda_i$  is disjoint from  $\lambda_j$  for all  $i \neq j$ . The node also includes a series connection of elements  $F_i$ ,  $i=1,2, \dots N$ , forming a second optical path, where each of said elements  $F_i$  extracts an optical signal of band  $\lambda_i$ . A plurality of transmitters  $T_i$ ,  $i=1,2, \dots N$ , are coupled to said elements  $E_i$  on a one to one basis. Further, a plurality of a receivers  $R_i$ ,  $i=1,2, \dots N$ , are coupled to said elements  $F_i$  on a one to one basis.*

Medin et al. clearly does not teach or suggest the coupling of the injection elements and the plurality of transmitters *on a one to one basis*. Further, Medin et al. clearly does not teach or suggest the coupling of the extracting elements and the plurality of receivers *on a one to one basis*. Medin et al. discloses only one configuration for add/drop filters in each of the OADM's 310. Specifically, each OADM 310 includes a filter module 410 that has *four (4)* add filters and *four (4)* drop filters. (See Medin et al., Figure 6 and corresponding description in the Specification). As readily illustrated in Figure 3, only a single transmitter and a single receiver is connected to each OADM 310. Hence, Medin et al. discloses a *four to one ratio for the coupling between the injection elements and the corresponding transmitter as well as a four to one ratio for the coupling between the extraction elements and the corresponding receiver*. As such, Medin et al. clearly does not anticipate or render obvious Claim 1. Therefore, Claim 1 is clearly patentable. Further, Claims 2 to 24 that depend from Claim 1 as also patentable for at least the reasons that Claim 1 is patentable.

Applicants' invention, as recited in Claim 25, is directed to a node that comprises *a first series connection of  $N$  elements, where  $N$  is greater than 1, forming a first optical path in a first node, where each of the elements in said first series injects an optical*

*signal of a preselected band of wavelengths, and where bands of wavelengths of the different elements in said first series are disjoint from each other. A second series connection of N elements forming a second optical path in said first node that is disjoint from said first optical path, where each of the elements in said second series extracts an optical signal of a preselected band of wavelengths, and where bands of wavelengths of the different elements in said second series are the same as the bands of wavelengths of the different elements in said first series. A plurality of transmitter elements, with each one of said transmitter elements being coupled to a different one of said N elements in said first series connection of N elements. A plurality of receiver elements, with each one of said receiver elements being coupled to a different one of said N elements in said second series connection of N elements.*

Medin et al. clearly does not anticipate or render obvious Claim 25. No single node of Medin et al. includes a plurality of injection elements forming a first optical path and a plurality of transmitter elements connected to a different one of the plurality of injection elements. Further, no single node of Medin et al. includes a plurality of extraction elements forming a second optical path and a plurality of receiver elements connected to a different one of the plurality of extraction elements. Rather, each of the four nodes depicted in Figure 3 in Medin et al. includes a single transmitter and a single receiver for each optical path. As such, Medin et al. clearly does not anticipate or render obvious Claim 25.

Independent Claim 31 recites the one to one coupling between the claimed plurality of transmitters and the corresponding injection elements as well as the plurality of receivers and the corresponding extraction elements. As previously explained, Medin

et al. does not teach or suggest this one to one coupling. On the contrary, Medin et al. expressly teaches a four to one connection. (See Medin et al., Figure 6)

### **OBVIOUSNESS**

“Determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on underlying facts.” *In re Kumar*, 2005 U.S. App. LEXIS 17215,\*8 (Fed. Cir. 2005).

“During examination, *the examiner bears the initial burden of establishing a prima facie case of obviousness*...The prima facie case is a procedural tool, and requires the examiner *to initially produce evidence to support a ruling of obviousness*. *Id.* (emphasis added)

*There must be a suggestion or motivation in the prior art to modify a reference to satisfy the claimed invention.* *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

*“The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification.”* *Id.* (emphasis added)

It is impermissible to use the inventor’s own work to find the necessary motivation or suggestion to modify a reference to satisfy the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303, 312-313 (Fed. Cir. 1983)(“To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of hindsight syndrome wherein that which only the inventor taught is used against the teacher.”)

The invention must be considered as a whole without the benefit of hindsight, and the claims must be considered in their entirety. *Rockwell International Corp. v. United States*, 147 3 F.3d 1358, 1364 (Fed. Cir. 1998)

"One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 837 F.2d 1071, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988). It is impermissible to use the claimed invention as a blueprint from which to reconstruct the prior art to satisfy the claimed invention. Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 227 USPQ 543, 548 (Fed. Cir. 1985) ("From its discussion of the prior art it appears to us that the court, guided by the defendants, treated each reference as teaching *one* or more of the specific components for use in the Feil system, although the Feil system did not then exist. Thus the court reconstructed the Feil system, using the blueprint of the Feil claims. As is well established, this is legal error.")

The prior art must be considered as a whole and suggest the desirability and thus the obviousness of making the combination. Lindermann Maschinefabrik GmbH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984)

When analyzed under the foregoing legal standards, the rejection of Claims 9, 10 32 through 35 based on Medin et al. cannot be sustained.

Claim 32 is the sole independent claim that has been rejected as allegedly being rendered obvious by Medin et al. The Examiner concedes that Medin et al. does not disclose the claimed physical relationship of the ports. However, the Examiner contends that such would be obvious because "such an arrangement does not alter operation of the device." This is nothing more than an assertion that it is obvious to modify the prior art because the prior art can be modified. As the controlling authority set forth above clearly holds, such is insufficient as a matter of law to render an invention obvious. Further,



there is simply no teaching, motivation or suggestion anywhere in Medin et al. or the art in general to modify Medin et al. to satisfy the claimed invention. As such, Claim 32 is clearly patentable. Claims 33 to 35 depend from Claim 32 and, therefore, are allowable for at least the reasons that Claim 32 is patentable.

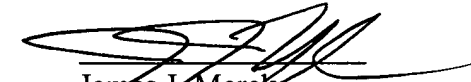
Applicants respectfully submit that the subject patent application is in condition for allowance. Hence, Applicants request that the subject patent application be passed to issuance without delay.

It is believed that no additional fees are due. However, should that determination be incorrect, the Commissioner is hereby authorized to charge any deficiencies to Deposit Account No. 50-0562 and notify the undersigned in due course.

Date:

11/15/06

Respectfully submitted,

  
James I. Merek  
Attorney for Applicants  
Reg. No. 32,158

MEREK, BLACKMON & VOORHEES, LLC  
673 South Washington Street  
Alexandria, Virginia 22314  
(703) 684-5633